

## WEATHER IN THE UNITED STATES

## GENERAL CONDITIONS

The exceptional features of the month as a whole can be explained in terms of the distribution and movement of cyclonic and anticyclonic systems and the free-air temperatures. (See Aerological observation.) More or less stagnation of the former at times contributed to the heavy rainfall of the Missouri, middle Mississippi, and lower Ohio Valleys. The temperature was below normal in about one half of the country and above in the other half. (See Charts III and IV.)—A. J. H.

## CYCLONES AND ANTICYCLONES

Fifteen Lows and eight HIGHS were plotted during May. The only general storm area of importance developed over the Great Basin on the 6th and died out over eastern Maine on the 11th. This storm reached its maximum intensity on the 8th and 9th, with a sea-level pressure of 28.78 inches at North Platte, Nebr., at 8 p. m. of the 8th. High-pressure areas were generally unimportant; but toward the end of the month the pressure was much above the normal over the Canadian interior, and this excess of pressure was moving southward over the North Central States at the close of the month.—W. P. Day.

## THE WEATHER ELEMENTS

By P. C. DAY, in Charge of Division

## PRESSURE AND WINDS

May, 1927, as a whole was in no important sense an unusual month; still widely separated sections had rather pronounced variations in certain features from the weather usually experienced in that month.

Among the important local items of unusual conditions appear the large number of severe storms that developed in the Plateau and Rocky Mountain regions; the unusually low barometric pressures attending these in some localities and the slow rate of movement eastward; the continued cool and wet weather over most northern districts; the great deficiency in precipitation over much of Florida and some other portions of the Southeast and in portions of the Great Plains from western Kansas southward, where the wheat crop was greatly injured; the persistent high winds in portions of Texas and some other southern localities; the excessive cloudiness over the Ohio and upper Mississippi Valleys, including near-by areas; and the unusually large number of local wind and hail storms over the southern Plains and thence northeast to the Great Lakes.

The month opened with general low-pressure over the Rocky Mountain and southwestern districts, which moved into the Great Plains and Mississippi Valley during the following two or three days, but without important precipitation. By the 6th low-pressure had again entered the Southwest and on the morning of the 7th it had developed considerable strength, though without important movement, and rain or snow had set in over the districts to the northward. During the following 24 hours the storm moved to eastern Colorado with a marked increase in strength, the sea-level barometric pressure falling below 29 inches at the center and was

attended by heavy snow to the northward. During the next 24 hours the storm moved slowly northeastward with undiminished intensity, heavy snow falling in the mountain districts, particularly in Wyoming, where during the 8th and 9th near-blizzard conditions prevailed, high winds and drifting snow causing the death of a number of persons and considerable loss to livestock, particularly lambs. From the 9th to 10th this storm moved with increased rapidity, but diminished intensity, to the upper Lakes and thence to the St. Lawrence Valley. Heavy snows occurred in connection with this storm over the middle and northern Rocky Mountains and near-by areas, and rainfall was widespread from the central and northern Plains eastward.

Considerable rain occurred in the central valleys and northeastern districts from the 13th to 17th as a moderate cyclone moved slowly eastward from North Dakota to New England, and some heavy rains occurred in eastern Texas and near-by areas on the 13th.

About the 17th to 19th slight cyclonic conditions overspread the central valleys and scattered rains fell in those areas and somewhat to the eastward, but no important storm development occurred.

By the 20th a well-defined storm had formed in western Colorado and during the following few days moved slowly eastward, reaching the middle Missouri Valley by the morning of the 23d, but without much precipitation save over districts to northward of the general center of the storm. During the following 24 hours low barometric centers had developed both north and south of the main storm center, which had rapidly dissipated, and by the following morning these had largely disappeared; but precipitation had covered most of the Mississippi and Ohio Valleys and near-by areas and during the following two days extended into and over most eastern districts.

During the latter part of the month storm conditions prevailed over the central Rocky Mountain and near-by areas and more or less precipitation occurred in those districts and to the northward, and on the 27th and 28th some heavy rains fell in the upper Mississippi and lower Ohio Valleys, and rain continued more or less general over the Northwest. The last few days had scattered precipitation in many portions of the country from the northern Rocky Mountains eastward and southeastward, but the rain areas were mainly small and the total falls light as a rule.

The mean sea-level pressure was highest, 30.10 to 30.15 inches, over the far Northwest, and it was above 30 inches over Florida and near-by areas. In these districts the averages were mainly above normal, but elsewhere they were less than normal and rather low on the whole over the interior and northeastern districts. Small insets on Charts I and II show the departures of the mean sea-level pressures from the normal for the month and the changes in pressure from April to May.

The month had a notably large number of severe local storms, nearly 50 having the characteristic features attending tornadoes, a number of which were distinctly severe. A total of nearly 250 lives were lost, almost 2,000 persons were injured, and property loss was estimated at more than \$10,000,000. Hailstorms also were frequent, and in several instances severe loss was sustained. Full statements as to the details of several of the more severe tornadoes appear elsewhere as separate items in this issue, and the complete list of all storms, with the usual items, appears in the table at the end of this section.